Each claim of the present application is set forth below with a parenthetical notation immediately following the claim number indicating the claim status. The Examiner's entry of these amendments prior to examination of the subject application is respectfully requested.

1 – 7. (CANCELLED)

8.   (ORIGINAL) A method for determining one or more faults causing a no trouble found event in a locomotive wherein no cause has been determined for the no trouble found event, the method comprising:

(a)   selecting a no trouble found event that occurred on the locomotive;

(b)   determining faults occurring on the locomotive within a predetermined time interval prior to the no trouble found event;

(c)   determining correlations between faults determined at step (b) and the no trouble found event; and

(d)   selecting at least one fault with a relatively high correlation from step (c).

9.   (ORIGINAL) The method of claim 8 wherein a locomotive repair is associated with each fault, the method further comprising:

(e)   implementing the repair associated with the selected fault on the locomotive.

10.   (ORIGINAL) The method of claim 8 wherein a plurality of locomotive repairs are associated with each fault, with each repair of the plurality of repairs having a weight value indicative of the probability that the repair will resolve the fault, the method further comprising:

(e)   selecting at least one repair having a relatively large weight value from the plurality of repairs; and

(f)   implementing the repair selected at step (e) on the locomotive.

11.   (ORIGINAL) The method of claim 8 wherein the step (c) further comprises analyzing locomotive operational data and operational data associated with each of the faults.

12.   (ORIGINAL) The method of claim 8 wherein the selected fault has the highest probability of causing the no trouble found event.

13.   (ORIGINAL) The method of claim 8 wherein the selected fault is indicative of a root cause for the no trouble found event.

14.   (ORIGINAL) The method of claim 8 wherein step (c) further comprises:

(c1)   forming a plurality of fault clusters from the determined faults, wherein each one of the plurality of fault clusters comprises at least one of the determined faults and the plurality of fault clusters comprises unique combinations of the determined faults;

(c2)   linking the no trouble found event with each one of the plurality of fault clusters to form a like plurality of no trouble found event/fault cluster combinations;

(c3)   determining a number of occurrences of each one of the plurality of no trouble found event/fault cluster combinations in a data base comprising historical no trouble found event/fault cluster combinations;

(c4)   determining a number of occurrences of each one of the plurality of fault clusters in a data base comprising historical fault clusters; and

(c5)   determining a correlation for each one of the plurality of no trouble found event/fault cluster combinations.

15.   (ORIGINAL) The method of claim 14 wherein the step (c5) comprises dividing the number of occurrences from the step (c3) by the number of occurrences from the step (c4).

16.   (ORIGINAL) The method of claim 14 wherein the step (d) further comprises:

(d)   selecting the no trouble found event/fault cluster combination having a relatively high correlation.

17.   (ORIGINAL) The method of claim 16 wherein each one of the plurality of fault clusters is associated with a locomotive repair, the method further comprising:

(e)   implementing the repair associated with the fault cluster of the selected no trouble found event/fault cluster combination.

18.   (ORIGINAL) The method of claim 14 wherein the data base comprising historical no trouble found event/fault cluster combinations comprises no trouble found event/fault cluster combinations from a plurality of locomotives.

19.   (ORIGINAL) The method of claim 14 wherein the data base comprising historical fault clusters comprises fault clusters from a plurality of locomotives.

20.   (ORIGINAL) The method of claim 8 wherein the step (d) further comprises:

(d1)   determining whether the correlation of the fault selected in step (c) exceeds a predetermined threshold;

(d2)   if said correlation does not exceed the threshold, returning to the step (b) for determining faults occurring on the locomotive within an extended time interval prior to the no trouble found event, wherein the extended time interval is longer than the predetermined time interval; and

(d3)   if said correlation exceeds the threshold, selecting a fault with the corresponding correlation.

21.   (ORIGINAL) The method of claim 8 wherein the step (d) further comprises:

(d1)   determining whether the correlation of the fault selected in step (c) exceeds a predetermined threshold;

(d2)   if the said correlation does not exceed the threshold, engaging a locomotive repair expert to analyze the no trouble found event and the faults occurring within a predetermined time prior to the no trouble found event; and

(d3)   if the highest correlation exceeds the threshold, selecting a fault with the highest correlation.

22.   (ORIGINAL) The method of claim 8 wherein a locomotive repair is associated with each fault, the method further comprising:

(e)   implementing the repair associated with the selected fault on the locomotive.

(f)   determining whether the implemented repair resolves the no trouble found event; and

(g)   if the implemented repair resolves the no trouble found event, associating the no trouble found event with the implemented repair for use in determining the one or more faults that cause a future no trouble found event.

23.   (ORIGINAL)   An article of manufacture comprising a computer program product comprising a computer-usable medium having computer-readable code therein for determining one or more faults causing a no trouble found event in a locomotive, wherein the no trouble found event comprises a locomotive fault for which no cause has been determined, the article of manufacture comprising:

(a)   a computer-readable program code module for selecting a no trouble found event that occurred on the locomotive;

(b)   a computer-readable program code module for determining faults occurring on the locomotive within a predetermined time interval prior to the no trouble found event;

(c)   a computer-readable program code module for determining correlations between faults determined at step (b) above and the no trouble found event; and

(d)   a computer-readable program code module for selecting at least one fault with a relatively high correlation from step (c).